Patent claims

1. A method for performing a high-throughput analysis, in which samples are analyzed in a continuous run and in which biochips with a multiplicity of measurement locations (spots) are used, having the following work steps:
- in a first work step (A), the measurement liquid is applied to the spots or biochip situated on a carrier,
- in a further work step (D), the measurement is carried out,
- in this case, both work steps (A, D) are effected simultaneously at different spots or biochips,
- as a result of the carrier being moved, a continuous measurement is effected with a speed that can be predetermined by the movement cycle of the tape.

2. The method as claimed in claim 1, characterized in that at least one work step (B, C) for temperature regulation and/or air conditioning of the measurement samples is interposed between the two work steps (A, D).

3. The method as claimed in claim 2, characterized in that a work step (B) serves for temperature regulation and a work step (C) serves as residence time of the measurement sample on the biochip.

4. The method as claimed in one of the preceding claims, characterized in that a temperature regulation is effected in the case of all the work steps (B-D) following the sample supply, in particular in the case of the measure (D).

5. The method as claimed in claim 1, characterized in that at least one spot array (11, 11a) is enclosed by a

hollow body (24, 34, 40) in order to create a spatial separation from other spot arrays.

6. The method as claimed in claim 5, characterized in that the hollow body (24, 34) is placed onto the biochip arrangement (1, 1a, 1b) in such a way that it surrounds at least one spot array (11, 11a) in sealing fashion with a peripheral wall (25).

7. The method as claimed in claim 5 or 6, characterized in that the hollow body (24, 40) serves for air conditioning of the gas phase present above a spot array (11, 11a).

8. The method as claimed in claim 6, characterized in that a rinsing liquid is conducted through the internal space (35) of the hollow body (34).

9. The method as claimed in one of claims 5 to 9, characterized in that a carrier (2, 2a) made of a flat material is used.

10. The method as claimed in claim 9, characterized in that a biochip arrangement (1b) with a tape-type carrier (2, 2a) made of flexible material is used.

11. The method as claimed in claim 10, characterized in that the tape-type carrier (2, 2a) is unwound from a roll and transported through an analysis unit (16).

12. The method as claimed in one of claims 1 to 8, characterized by the use of a carrier (2) populated with electrically readable biochips (4).

13. The method as claimed in one of claims 1 to 9, characterized by the use of a carrier (2, 2a) on which analysis-specific data are present.

14. The method as claimed in one of claims 1 to 13, characterized in that, for the temperature control of a spot array (11, 11a) or a reaction that takes place there, heat is supplied or dissipated from the rear side region of the carrier (2, 2a) opposite to the array.

15. The method as claimed in claim 14, characterized in that, for the purpose of supplying heat or dissipating heat, the rear side region is brought into areal contact with a coolable or heatable body (29).

16. A device for carrying out the method as claimed in claim 1 or one of claims 2 to 12, having a biochip arrangement, each biochip having so-called measurement spots, characterized in that the biochips (1, 1a, 1b) are fixedly arranged at a mutual distance on a common carrier (2, 2a) made of flat material, the carrier (2, 2a) being able to be moved on in a predeterminable cycle, and the carrier (2, 2a) being assigned means (19) for supplying the measurement liquid, on the one hand, and means (34, 38) for carrying out the measurement, on the other hand.

17. The device as claimed in claim 16, characterized in that the spot arrays (11) are arranged in a depression.

18. The device as claimed in claim 16 or 17, characterized in that data for analysis control and data concerning the type and position of the spot arrays (11, 11a) are present on the carrier (2, 2a).

19. The device as claimed in claim 18, characterized in that the data are stored in at least one memory chip (44).

20. The device as claimed in one of claims 16 to 19, characterized in that the carrier (2, 2a) is essentially formed from a flat material.

21. The device as claimed in claim 20, characterized in that the carrier (2, 2a) is formed as a flexible tape.

22. The device as claimed in one of claims 16 to 21, characterized in that electrically readable biochips (4) with in each case a spot array (11) and electrical contact areas (9) are present on the carrier (2).

23. The device as claimed in claim 22, characterized in that the spot arrays (11) and the contact areas (9) are arranged on different sides of the carrier (2).

24. The device as claimed in claim 22 or 23, characterized in that the biochips (4) are embedded in an electrically insulating encapsulating composition (13), a cutout (14) that frees the spot array (11) and forms a depression being present in the encapsulating composition (19).

25. The device as claimed in claim 24, characterized in that the top side (21) of the encapsulating composition (13) that encompasses the cutout (14) is formed as a planar area.

26. The device as claimed in one of claims 18 to 25, characterized in that the carrier (2, 2a) has a perforation (15) extending in its longitudinal direction.

27. The device as claimed in claim 26, characterized in that the carrier (2, 2a) has a perforation (15) on both sides and a width of 36 mm.